

Work Order ID 131609

Monday, April 20, 2015 10:10:30 AM

131609

Page 1

Item ID: 646.3313

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Upper Guide

Start Date: 4/20/2015 Start Qty: 5.00

5

Cust Item ID:

Required Date: 4/20/2015 Req'd Qty: 5.00

5

Customer:

Reference:

Approvals: Process Plan: M C J Date: 1504-20

Tooling:

Date:

Run

Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
646.3300	N/C3

100

0.00

100

BAND SAW

Bandsaw

Memo

0.02

Jeaspa Bandsaw

Cut Blank at 13.500"

*** ONE BLANK MAKES TWO PARTS***

DAS

44

9-89

15/05/14

110

0.00

110

-HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.29

HAAS CNC vertical machine #1

1-Machine per folio FB152

DWG REV: N/C

FOLIO REV: N/C

2- deburr and break all sharp edges

DAS

44

9-89

15/05/14

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																	
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Wbrk Order ID 131609

Monday, April 20, 2015 10:10:30 AM

131609

Page 2

Item ID: 646.3313

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Upper Guide

Start Date: 4/20/2015 Start Qty: 5.00

5

Cust Item ID:

Required Date: 4/20/2015 Req'd Qty: 5.00

5

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC2- Inspect parts off machine FAI/FAIB	0.00							
120						6	0		DAS 44 9-89 15/05/14
QC	Memo	0.00							
Quality Control									
130	QC8- Inspect parts - second check	0.00							
130						6			DAS 25 9-89 15-5-15
QC	Memo	0.00							
Quality Control									
131		0.00							
131									
HandFinish	Memo	0.00							
Hand Finishing	CLEAN AND REMOVE ALL PART MARKING								

N/A

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation		Disposition			

Root Cause			FAULT CATEGORY		
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐				

Work Order ID 131609

Monday, April 20, 2015 10:10:30 AM

131609

Page 3

Item ID: 646.3313 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Upper Guide
 Start Date: 4/20/2015 Start Qty: 5.00 ***5*** Cust Item ID:
 Required Date: 4/20/2015 Req'd Qty: 5.00 ***5*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	Outsource process-Anodize per QSI017 4.1.10.1	0.00							
140									
Outsource4	Memo	0.00							
Outsource process - Anodize	Issue P/O to ATG : <u>28568</u>								
	1- Black Anodize as per Dwg 646.3300								
	2- PRIME AS PER DWG, SEE NOTE #2								
	Certification of Comformity is required								
150	Receive & Inspect for Damage & Mat'l Certs	0.00							
150									
Packaging	Memo	0.00							
Packaging									
155	QC5- Inspect part completeness to step on W/O	0.00							
155									
QC	Memo	0.00							
Quality Control									

C2 MAR 27 2015 6
MAY 26 2015
6x 8015-06-01
(6) DAS
38
9-00
JUN 02 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐			

Work Order ID 131609

Monday, April 20, 2015 10:10:30 AM

131609

Page 4

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 Item Name: Upper Guide
 Start Date: 4/20/2015 Start Qty: 5.00 ***5*** Cust Item ID:
 Required Date: 4/20/2015 Req'd Qty: 5.00 ***5*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***
 Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	Identify as per dwg & Stock Location: <u>CCK117</u>	0.00							
180									
Packaging	Memo	0.00				<u>6x</u>	<u>DAS</u> <u>28</u> <u>9-89</u>	<u>JUN 02 2015</u>	
Packaging	***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***								
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.00							
Quality Control									

MLJ JUN 03 2015

MLJ JUN 03 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Misidentified ☐	Past Due ☐																																																																

Picklist Print

Monday, April 20, 2015 10:10:32 AM

Page 1

Work Order ID: 131609

131609

Parent Item: 646.3313

646.3313

Parent Item Name: Upper Guide

Start Date: 4/20/2015

Required Date: 4/20/2015

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP REV:A NEW ISSUE 12/11/14 JFS VERIFY BY: JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6B5.000X0.375		Purchased		No		100	f	13.4340	0.563	3			
M7075T6B5 000X0.375													
7075-T6 BAR 5.000" X 0.375"													

DAS
44
9-89

15/05/14

Location

Loc Qty

Loc Code

MAT005

13.434

m130175

2

* m131259

10.684

m131552

0.75

3.375

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : _____			

APICAL
INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO.

04765

SHEET 1 OF 1

DWG NO. 646.3300

REV: NC

PREPARED BY

J. SOTO

DATE: 12/08/2014

EFFECT ON DWG

☐ INC. ☒ UNINC.

DWG TITLE: UPPER CUTTER ASSY

APPROVED BY:

ENGR

MFG

QC

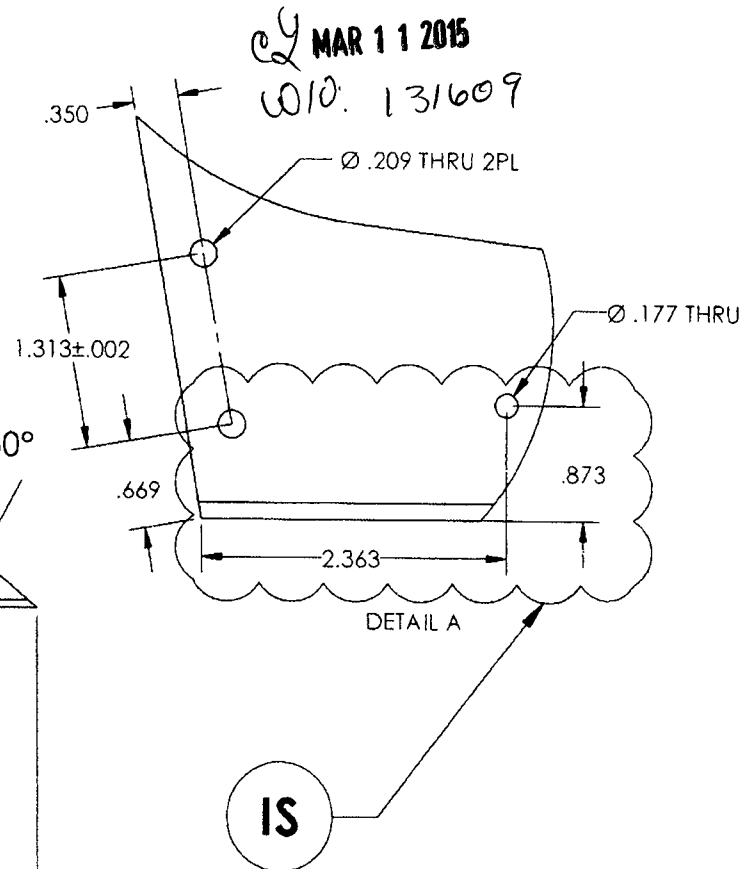
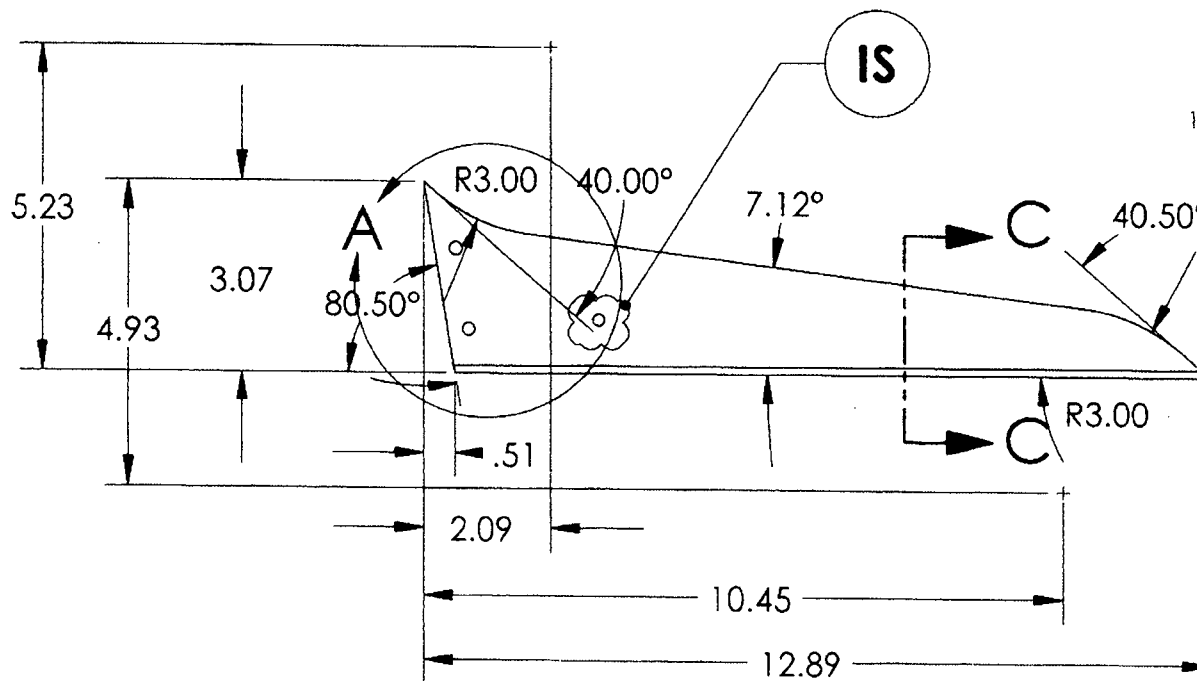
EFF.

NEXT ORDER

TRANSACTION CODES (TC):
A-ADD
R-REVISE
C-CREATE
D-DELETE

REASON: ADDED HOLE DIMENSION TO 646.3313.

SHEET 5 IS:



DOCUMENTS EFFECTED:

☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM

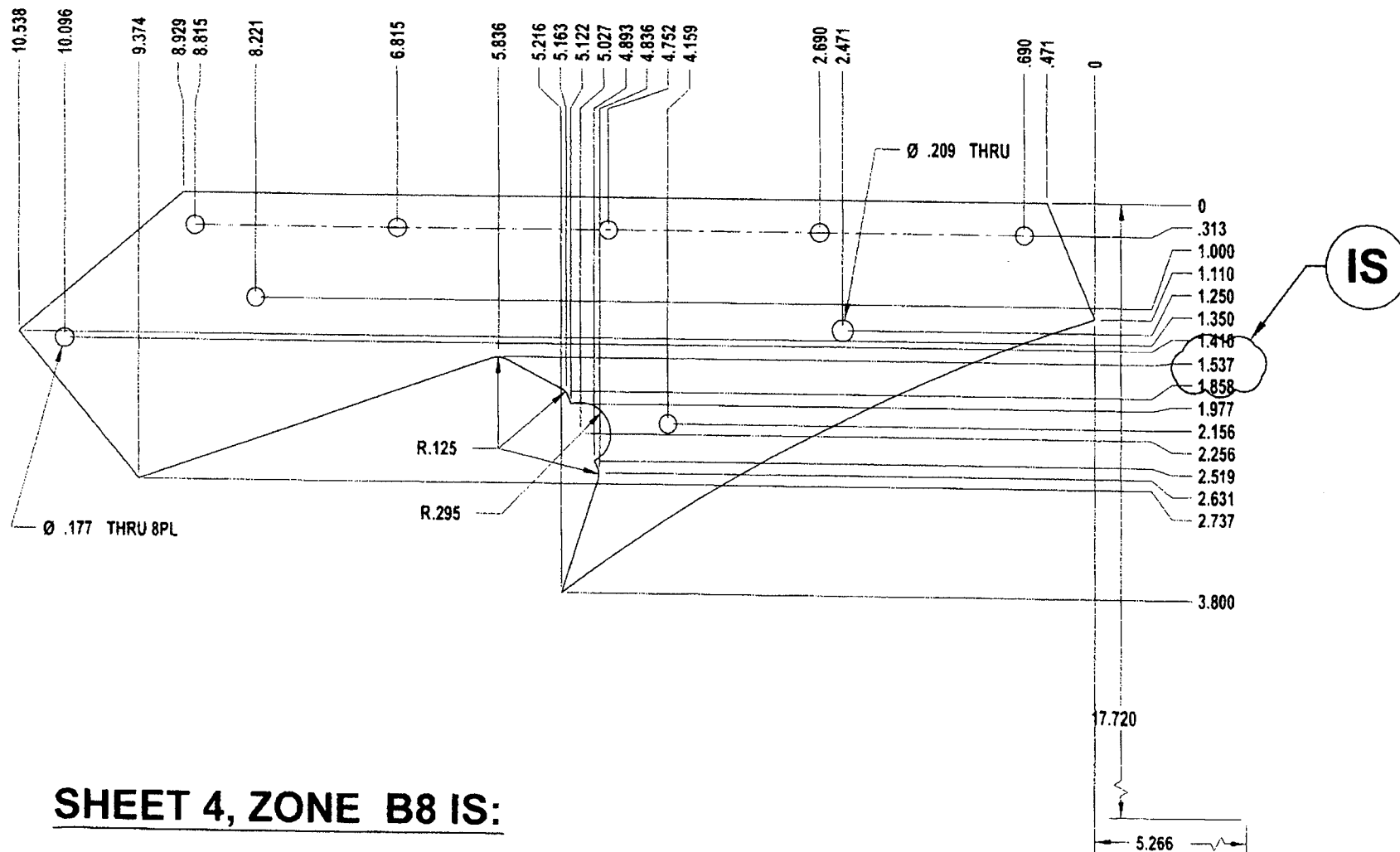
CHANGE CATEGORY

☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED

☐ YES ☒ NO

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 03724				SHEET 1 OF 1	
	DWG NO. 646.3300		REV: N/C	PREPARED BY B. PETERS	DATE: 12/05/12	EFFECT ON DWG ☐ INC. ☒ UNINC.
	DWG TITLE: UPPER CUTTER ASSY					
APPROVED BY: ENGR <i>[Signature]</i>		MFG <i>[Signature]</i>		QC <i>[Signature]</i>	EFF: NEXT ORDER	
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE		REASON: REVISED ORDINATE DIMENSION.				ECR: D-12-025

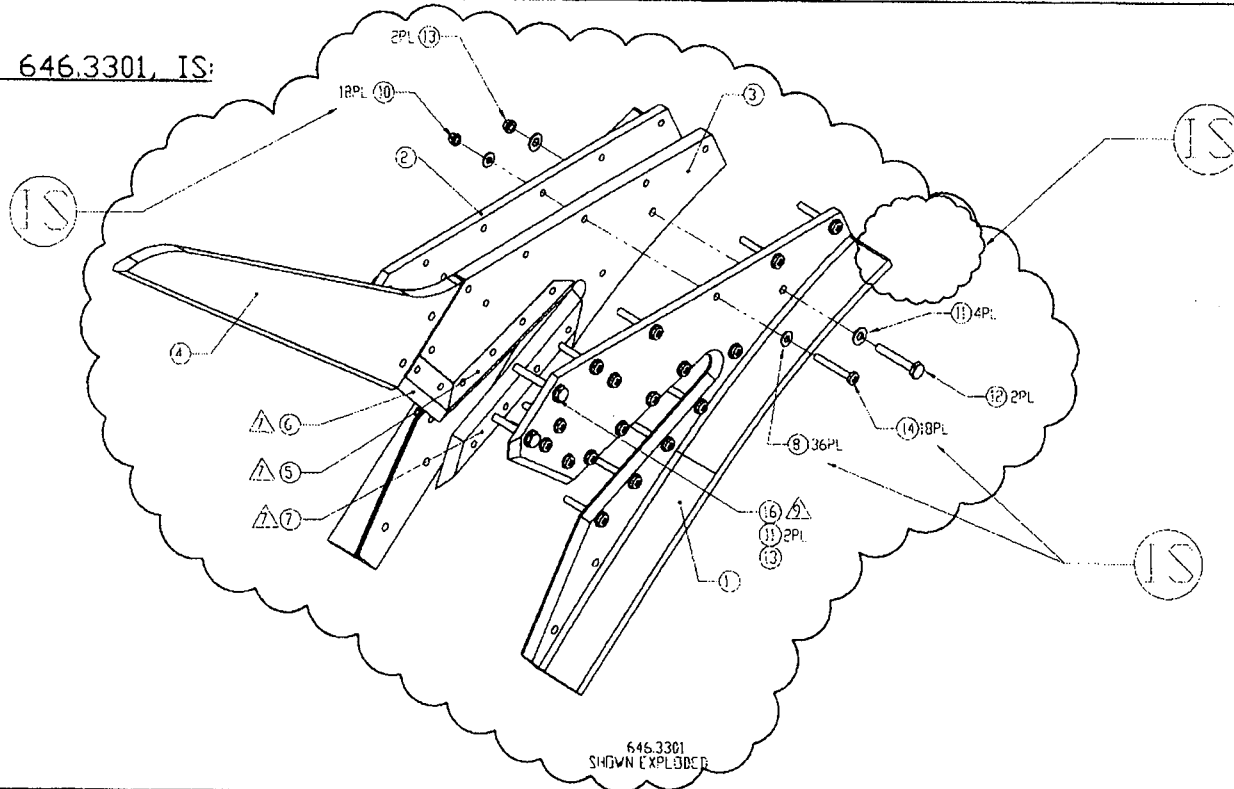


SHEET 4, ZONE B8 IS:

DOCUMENTS EFFECTED:	☐ RFMS ☐ MDL ☐ INSTALL INSTRU ☐ ICA ☐ BOM	CHANGE CATEGORY ☐ MAJOR ☒ MINOR	DER REVIEW REQUIRED ☐ YES ☒ NO
---------------------	--	---	--

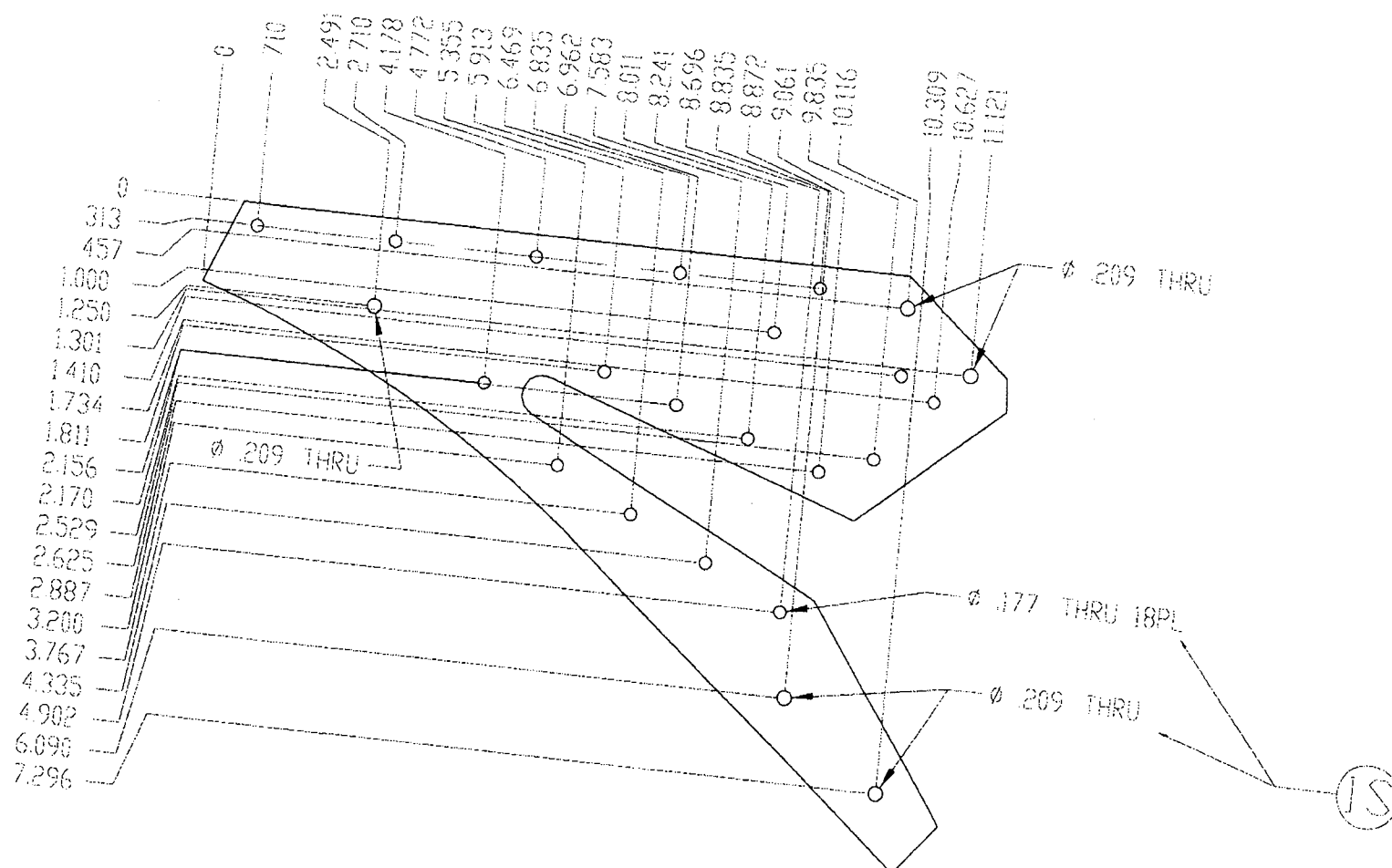
APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 02196		SHEET 1 OF 2	
	DWG NO. 646.3300	REV: N/C	PREPARED BY S. HUFF	DATE: 01/05/09
	DWG TITLE: UPPER CUTTER ASSY EFFECT ON DWG ☐ INC. ☒ UNINC.			
APPROVED BY: ENGR <i>[Signature]</i>		MFG: <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: NEXT ORDER
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE		REASON: REMOVED RIVETS IN FAVOR OF ADDITIONAL SCREWS		

SHEET 1, VIEW 646.3301, IS:



14	R	601.2765	18	SCREW	MS27039-0819
10	R	601.1541	18	LOCKNUT	MS21042L08
9	D	601.2766	3	RIVET	MS20470AD5-18
8	R	601.2764	36	WASHER	NAS1149FN832P
			.3301		
F/N TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION	
DOCUMENTS EFFECTED:					CHANGE CATEGORY
					☐ MDL ☒ INSTALL INSTRU ☒ ICA ☐ FMS ☒ BOM ☐ MAJOR ☒ MINOR
					DER REVIEW REQUIRED
					☐ YES ☒ NO

SHEET 3, SECTION VIEW A-A, IS:

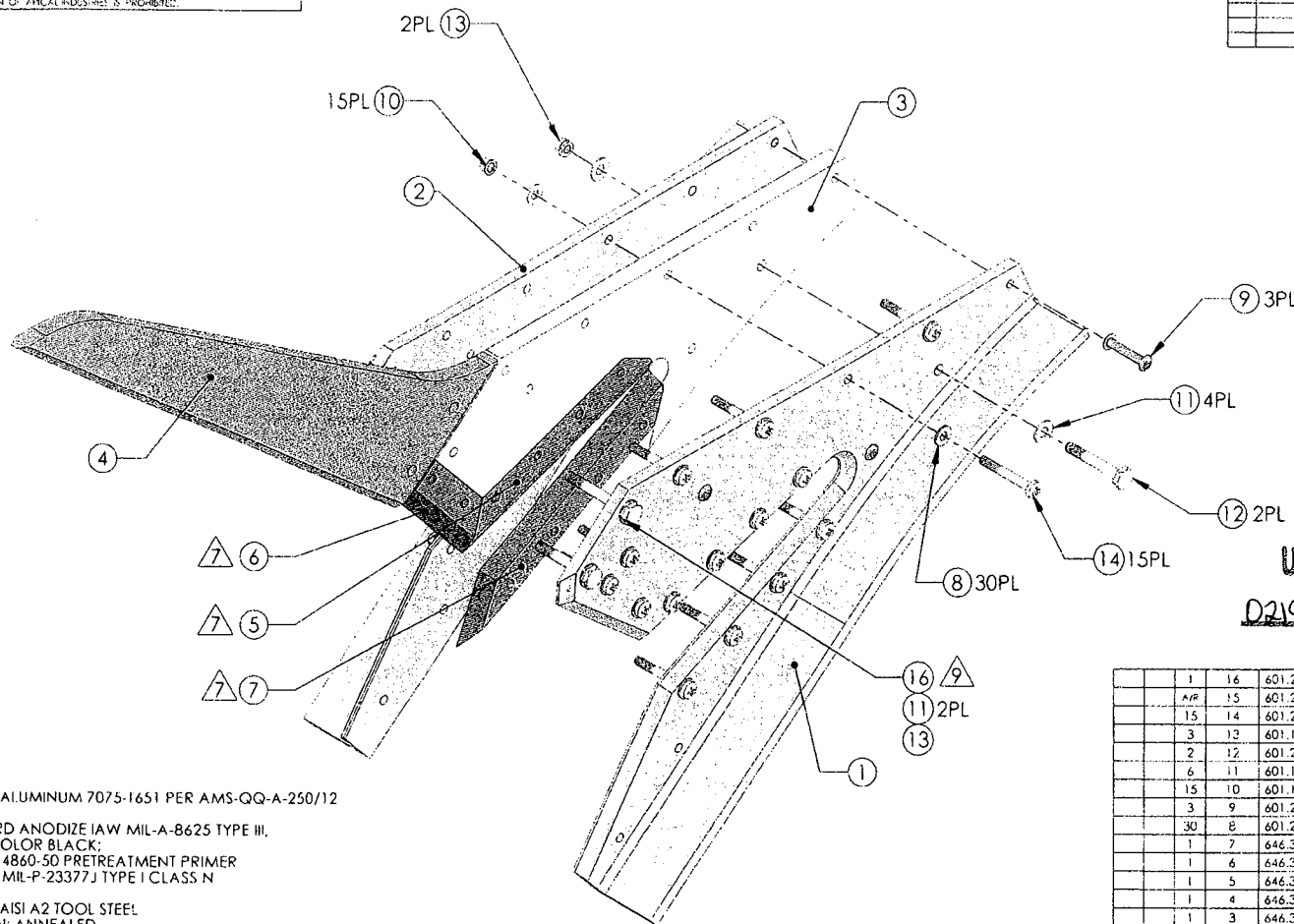


SECTION A-A

PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION

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REV	DESCRIPTION	DATE	APPROVED



UNINCORPORATED ECN(s)

02196, 03724, 04765

NOTES:

1 MATERIAL: ALUMINUM 7075-16S1 PER AMS-QQ-A-250/12

2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK; CARDINAL 4860-50 PRETREATMENT PRIMER PRIME IAW MIL-P-23377J TYPE I CLASS N

3 MATERIAL: AISI A2 TOOL STEEL CONDITION: ANNEALED POST PROCESS: HEAT TREAT TO 58-62 Rc ROCKWELL HARDNESS

4 FINISH: PRIME IAW MIL-P-23377J TYPE I CLASS N

5. DEBURR AND BREAK ALL SHARP EDGES EXCEPT WHERE OTHERWISE NOTED

6. IDENTIFY IAW MPP-120

7 APPLY F/N 15 AS REQUIRED TO ALL FAYING SURFACES OF F/N 5, 6 & 7 UPON ASSEMBLY

8 CUTTING EDGE INTENDED TO BE SHARP, DO NOT BREAK SHARP EDGE

9 INSTALL FASTENER FINGER-TIGHT

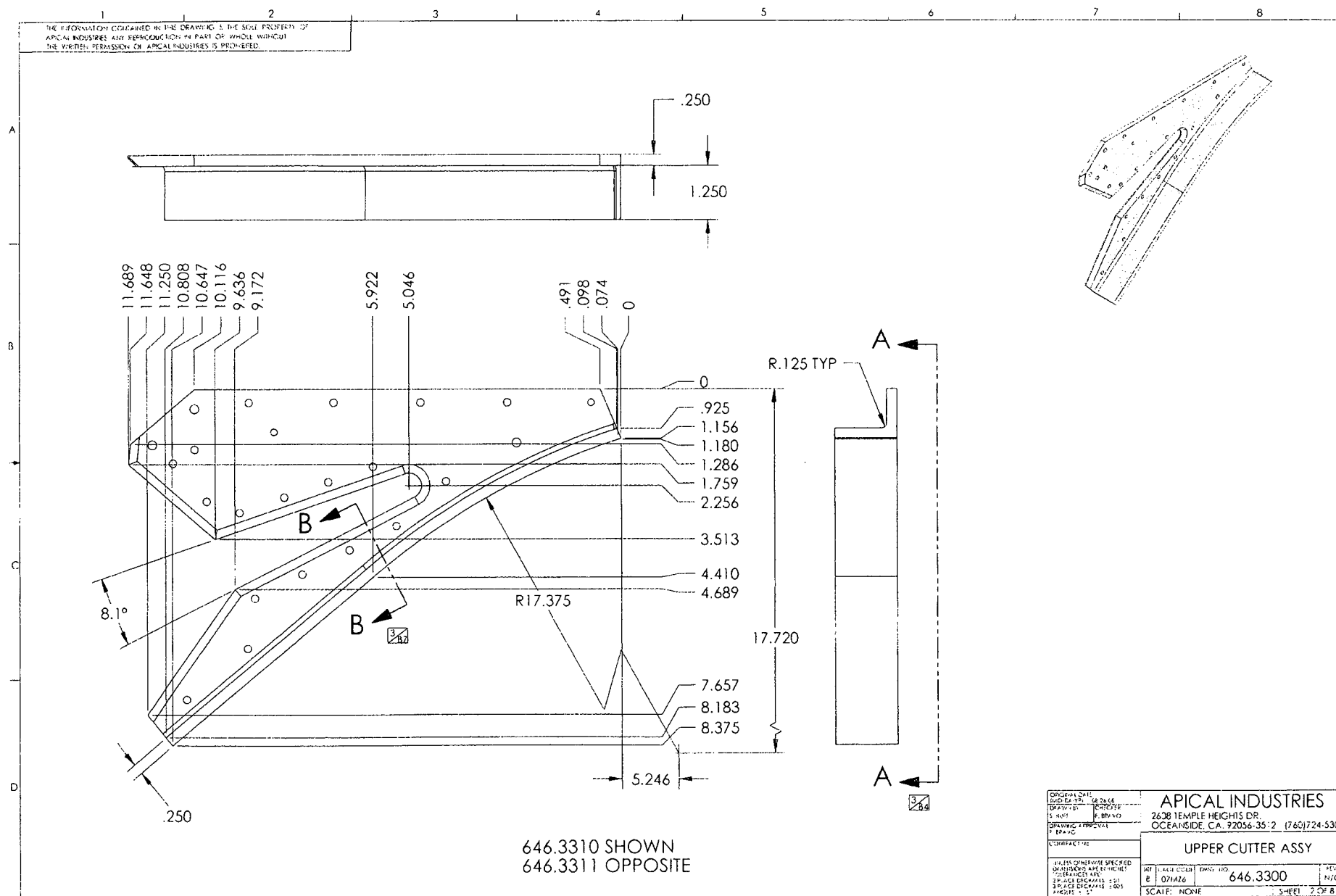
646.3301
SHOWN EXPLODED

QTY	REV	ITEM #	DESCRIPTION	MATL	SPEC.
1	16	601.2834	BOLT	AN2-144	
15	15	601.2045	RTV LOCITE 598		
15	14	601.2765	SCREW	MS27035-0814	
3	12	601.1624	LOCKNUT	MS27104-12	
2	12	601.2763	BOLT	AN2-124	
6	11	601.1607	WASHER	MS1114900350	
15	10	601.1541	LOCKNUT	MS11040008	
3	9	601.2766	RIVET	MS20410A05-18	
30	8	601.2764	WASHER	MS1114910229	
1	7	646.3316	BLADE		
1	6	646.3315	BLADE		
1	5	646.3314	BLADE		
1	4	646.3313	UPPER GUIDE		
1	3	646.3312	CENTER PLATE		
1	2	646.3311	RH HALF		
1	1	646.3310	LH HALF		
1	0	646.3301	UPPER CUTTER ASSY		

QTY	REV	ITEM #	DESCRIPTION	MATL	SPEC.
1	16	601.2834	BOLT	AN2-144	
15	15	601.2045	RTV LOCITE 598		
15	14	601.2765	SCREW	MS27035-0814	
3	12	601.1624	LOCKNUT	MS27104-12	
2	12	601.2763	BOLT	AN2-124	
6	11	601.1607	WASHER	MS1114900350	
15	10	601.1541	LOCKNUT	MS11040008	
3	9	601.2766	RIVET	MS20410A05-18	
30	8	601.2764	WASHER	MS1114910229	
1	7	646.3316	BLADE		
1	6	646.3315	BLADE		
1	5	646.3314	BLADE		
1	4	646.3313	UPPER GUIDE		
1	3	646.3312	CENTER PLATE		
1	2	646.3311	RH HALF		
1	1	646.3310	LH HALF		
1	0	646.3301	UPPER CUTTER ASSY		

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300
UPPER CUTTER ASSY
REV 16
DATE 07/16/16
SCALE NONE
SHEET 1 OF 8

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1 2 3 4 5 6 7 8

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A

B

C

D

0 .710 2.491 2.710 4.178 4.772 5.355 5.913 6.469 6.835 6.962 7.583 8.011 8.241 8.696 8.835 8.872 9.061 9.835 10.116 10.309 10.627 11.121

0 .313 .457 1.000 1.250 1.301 1.410 1.734 1.811 2.156 2.170 2.529 2.625 2.887 3.200 3.767 4.335 4.902 6.090 7.296

Ø .209 THRU

Ø .209 THRU

Ø .177 THRU 20PL

SECTION A-A

SECTION B-B

200 X 45.0° TYP (.250)

DATE: 08-26-00	DRW: JCH	CHK: JCH	APP: JCH
APICAL INDUSTRIES			
2600 TEMPLE HEIGHTS DR.			
OCEANSIDE, CA 92056-3512 (760) 724-5300			
UPPER CUTTER ASSY			
SCALE: NONE			
SHEET: 3 OF 8			

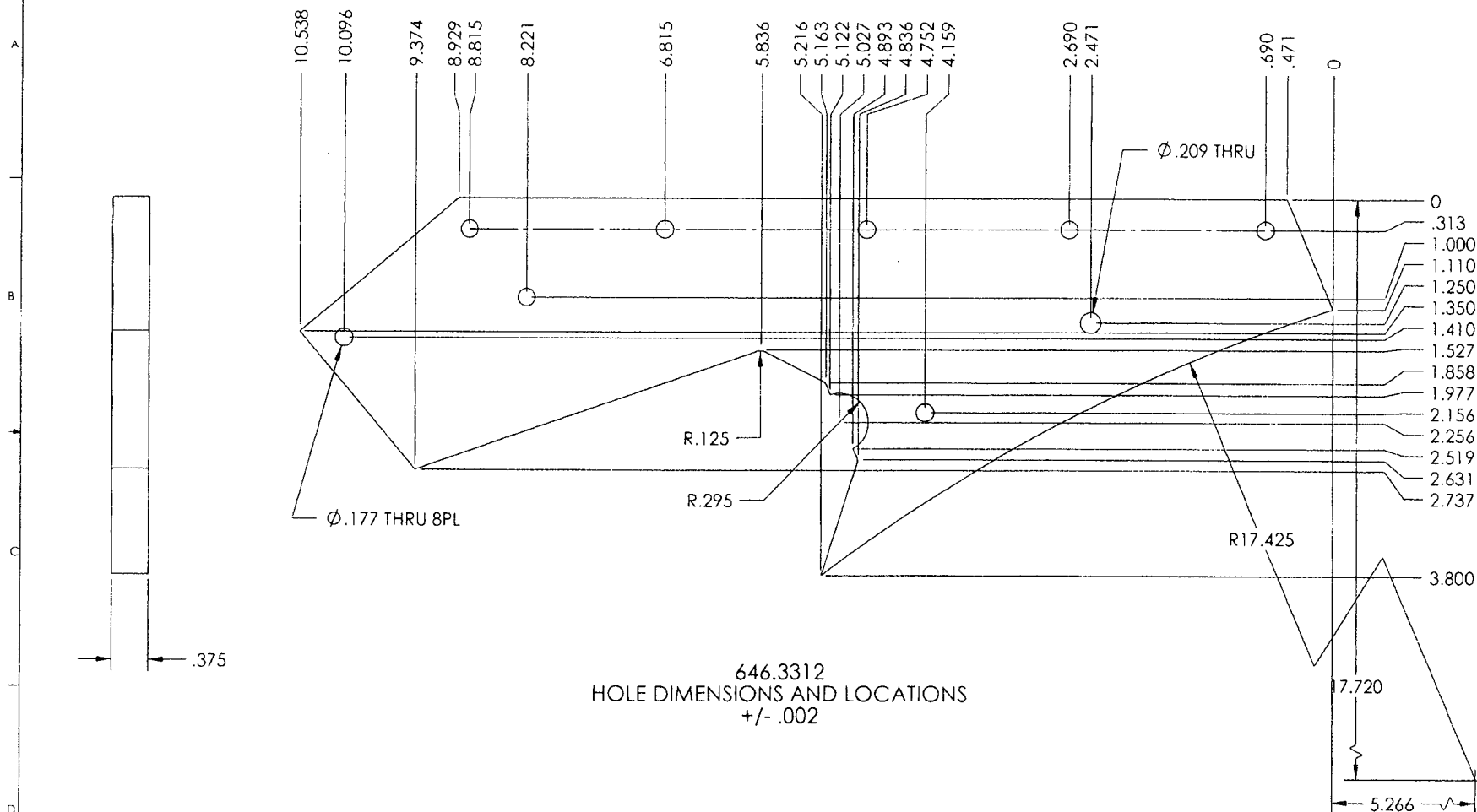
SECTION B-B 

SECTION A-A 

ORDER DATE ORDER DATE QUANTITY UNIT PRICE/EXTENSION COMMENTS	APICAL INDUSTRIES 2600 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760)/24-5300
ORDER NO. ORDER NO. ORDER NO. ORDER NO. ORDER NO.	UPPER CUTTER ASSY
ORDER NO. ORDER NO. ORDER NO. ORDER NO. ORDER NO.	646.3300
ORDER NO. ORDER NO. ORDER NO. ORDER NO. ORDER NO.	SCALE NONE
ORDER NO. ORDER NO. ORDER NO. ORDER NO. ORDER NO.	SHEET 3 OF 8

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REV	DESCRIPTION	DATE	APPROVED

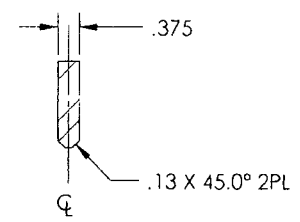
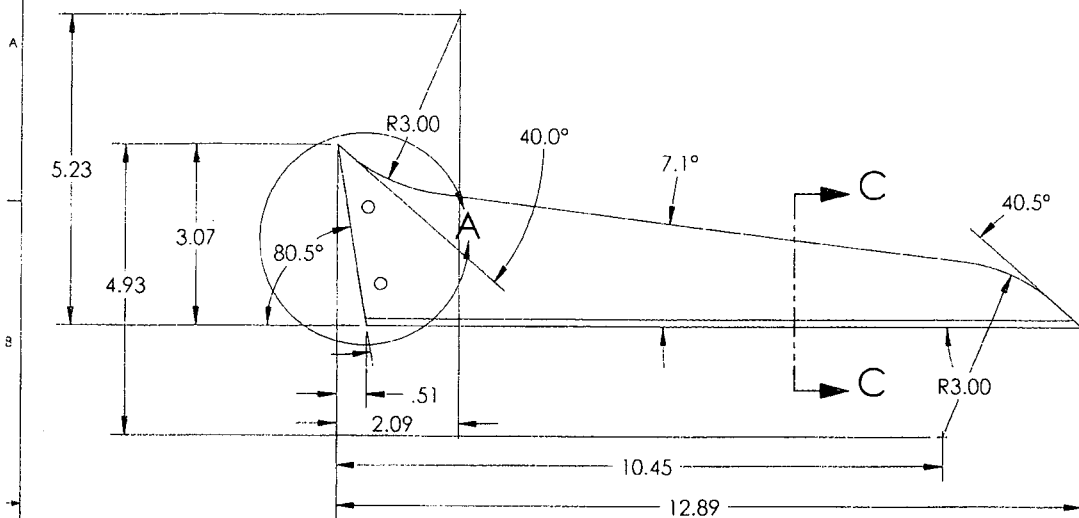


646.3312
HOLE DIMENSIONS AND LOCATIONS
+/- .002

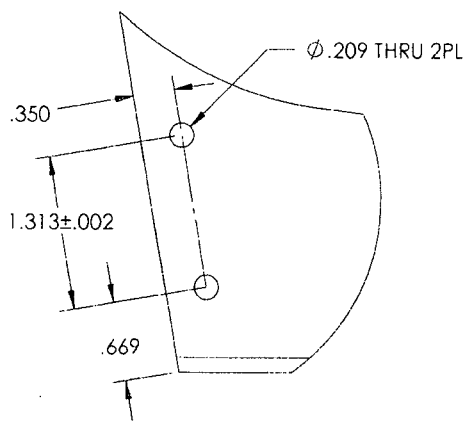
DATE: 08/25/06 DRAWN BY: J. M. H. / P. H. A. V. C. CHECKED BY: J. M. H. / P. H. A. V. C. DATE: 08/25/06 CONTRACT NO.:	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS ARE .001 FRACTIONS ARE 1/16 HOLE DIMENSIONS 1:100 ANGLES 1:10	SHEET NO.: 646.3300 SCALE: NONE SHEET 4 OF 8

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES AND REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

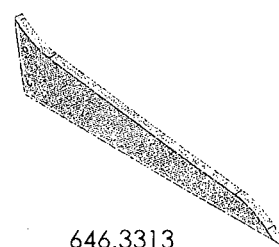
REV	DESCRIPTION	DATE	APPROVED



SECTION C-C



DETAIL A

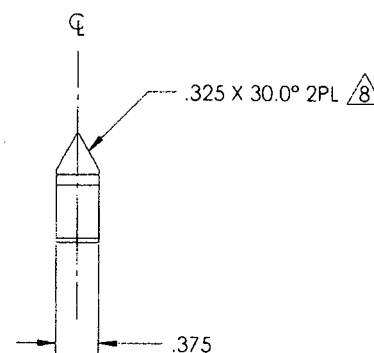
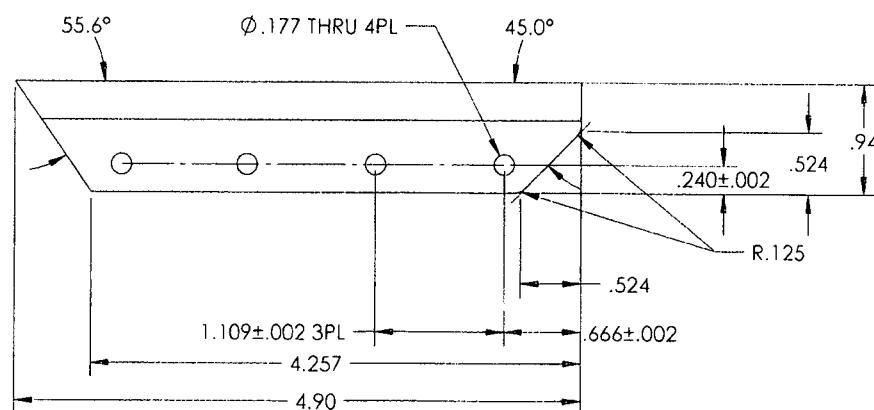
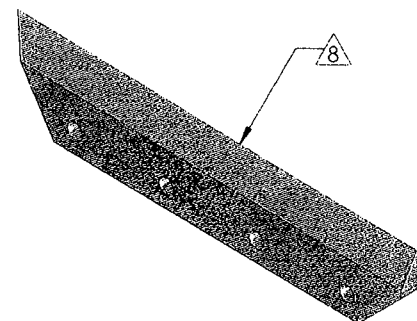


646.3313

ORIGINAL DATE: 06-26-95 DRAWN BY: J. H. H. / J. H. H. CHECKED BY: J. H. H. / J. H. H. DESIGNED BY: J. H. H. / J. H. H. C. H. H. H. H. H.		APICAL INDUSTRIES 2408 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 1760/724-5300	
DRAWING APPROVAL: J. H. H. H. H. H. C. H. H. H. H. H.		UPPER CUTTER ASSY	
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: FINISH DIMENSIONS: 12.1 FINISH DIMENSIONS: 12.1	SHEET: 5 OF 5 SCALE: NONE	PART NO: 646.3300 REV: N/C	DATE: 07/12/95

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF
APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT
THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

REV	DESCRIPTION	DATE	APPROVED



646.3314

ORIGINAL DATE 10-01-01	BY 2648	APICAL INDUSTRIES	
DRAWN BY S-MIT	CHECKED P. BLAKE	2508 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760)724-5300	
DRAWING APPROVED P. BLAKE	DATE 01/01/01	UPPER CUTTER ASSY	
PARTS CONTAINED THEREIN CONTAINED IN THIS DRAWING 1. IN PLACE OF PARTS 2. IN PLACE OF PARTS 3. IN PLACE OF PARTS		REV B	DATE 07/10/01
SCALE NONE		REV NYC	

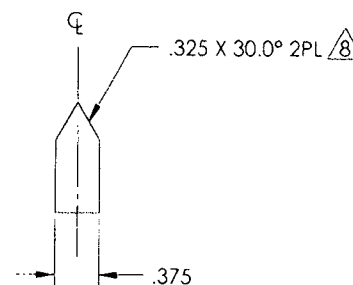
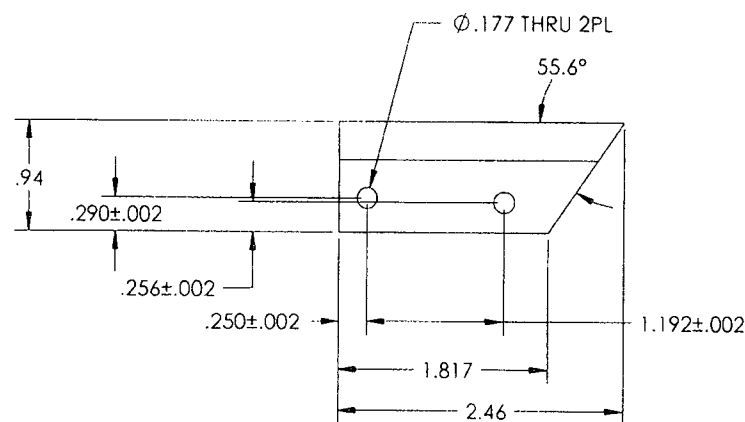
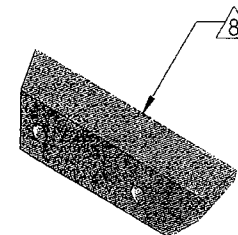
646.3300

SCALE NONE

SHEET 6 OF 8

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

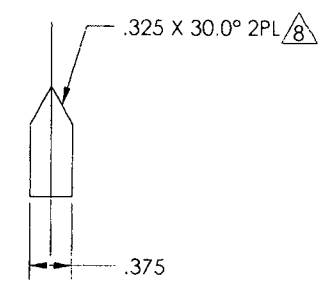
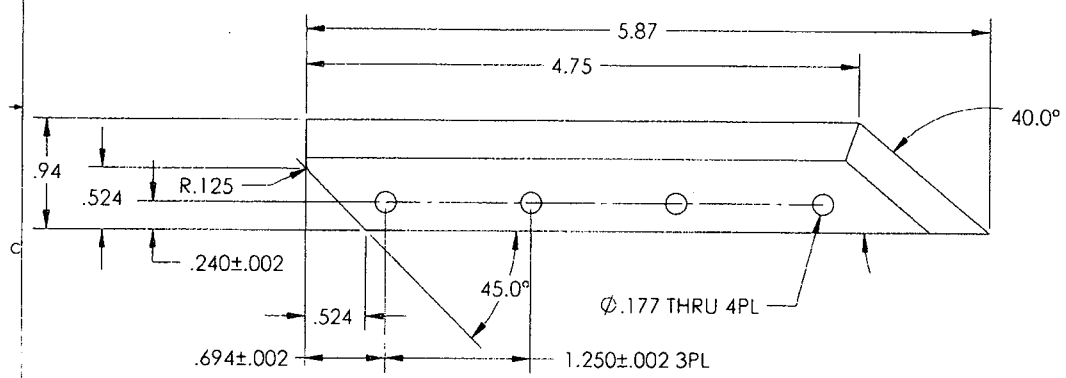
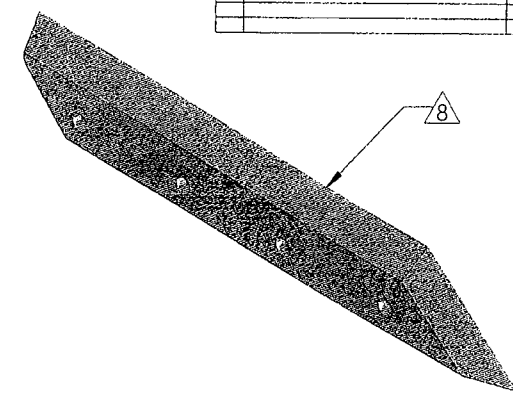


646.3315

ORIGINAL DATE: 08-28-00 DRAWN BY: J. NICHOL CHECKED BY: P. BLAVO DRAWING APPROVED BY: P. BLAVO CONTRACT NO.:	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1. FRACTIONS: ± .01 2. DECIMALS: ± .001 3. ANGLES: ± 1°	UPPER CUTTER ASSY PART NO: 646.3300 SCALE: NONE SHEET: 7 OF 8

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



646.3316

ORIGINAL DATE: 08-20-05		APICAL INDUSTRIES	
DRAWN BY: CHIEF	1-01	2608 TEMPLE HEIGHTS DR.	
ENGINEER: CHIEF	1-01	OCEANSIDE, CA. 92056-3512 (760)724-5300	
CHECKED: CHIEF	1-01	UPPER CUTTER ASSY	
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES		REV. B	646.3300
TOLERANCES ARE:		SCALE: NONE	SHEET: E OF 2
FRACTIONS: 1/16, 1/8, 1/4, 1/2, 3/4, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100			



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO28568**

Purchase Order Date 5/22/2015

PO Print Date 5/26/2015

Page Number 2 of 4

Order From :

VC-ATG001

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 613-446-4544

Ship To Contact

Ship To Phone

Ship Via: VENDOR'S TRUCK

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

Line Total: \$150.00

3 131609

646.3313 UPPER GUIDE
REV. N/C

6/1/2015

Yes

6/1/2015

6.00

\$13.10

\$78.60

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2
PRIME: AS PER IAW MIL-P-23377J TYPE I, CLASS N

8015-06-01

Line Total: \$78.60

4 132668

646.3715 STRUT
DOUBLER REV. A

6/1/2015

Yes

6/1/2015

4.00

\$6.25

\$25.00

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2
PRIME: AS PER IAW MIL-P-23377J TYPE I, CLASS N

Line Total: \$25.00

Note:

5/26/2015



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada
Ph: (613) 446-4544
Fax: (613) 446-4556

Pack List

Number: 63728

Date: 29-May-15

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via	
Quantity	Description		
2 ea	Part: 41228-301-082-005 BLUE ANODIZE MIL-A-8625 TYPE II CLASS 2 Job: 20150387	Rev: PO: PO28568	Line:
6 ea	Part: 646.3313 UPPER GUIDE HARD ANODIZE BLACK AS PER MIL-A-8625 TY III, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20150388	Rev: N/C PO: PO28568	Line: <i>SP 15-06-01</i>
4 ea	Part: 646.3715 STRUT DOUBLER HARD ANODIZE BLACK AS PER MIL-A-8625 TY III, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20150389	Rev: A PO: PO28568	Line:
10 ea	Part: 646.3718 HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2 PRIME MIL-P-23377J TYPE I CLASS N PAINT IS SUPPLIED BY CUSTOMER Job: 20150390	Rev: PO: PO28568	Line:
6 ea	Part: 646.3810 BRACKET HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER	Rev: N/C	



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada
Ph: (613) 446-4544
Fax: (613) 446-4556

Pack List

Number: 63728

Date: 29-May-15

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms	Ship Via														
<table border="1"><thead><tr><th>Quantity</th><th>Description</th></tr></thead><tbody><tr><td></td><td>with all requirements, specifications and drawings referenced in the purchase order.</td></tr><tr><td></td><td>ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY</td></tr><tr><td></td><td>DATE : <u>29/5/15</u></td></tr><tr><td></td><td>CERTIFIED SIGNATURE : <u></u></td></tr><tr><td></td><td>RECEIVER SIGNATURE : _____</td></tr><tr><td></td><td></td></tr></tbody></table>		Quantity	Description		with all requirements, specifications and drawings referenced in the purchase order.		ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY		DATE : <u>29/5/15</u>		CERTIFIED SIGNATURE : <u></u>		RECEIVER SIGNATURE : _____		
Quantity	Description														
	with all requirements, specifications and drawings referenced in the purchase order.														
	ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY														
	DATE : <u>29/5/15</u>														
	CERTIFIED SIGNATURE : <u></u>														
	RECEIVER SIGNATURE : _____														
															